GENERATION OF VISION TECHNOLOGY

VLSI VISION LIMITED

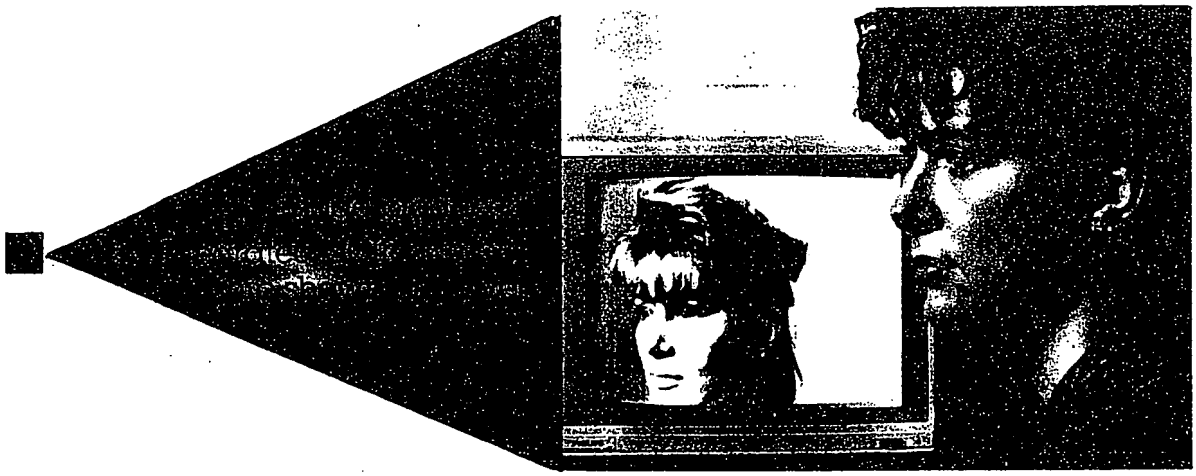
TECHNOLOGY

Innovative work at Edinburgh University has resulted in the demonstration of novel silicon imaging techniques which offer unprecedented reductions in image sensor cost, size and power consumption. This new technology promises to revolutionise existing vision applications and enables a range of new products in consumer and commercial markets that have been previously unapproachable.

The sensors are fabricated in standard CMOS VLSI technology, commonly sourced for ASIC components and are powered from a single supply of 5V.

The techniques provide a capability of vision system integration which is unachievable by existing image sensing technologies such as CCD. Combining array sensors, analogue signal conditioning and digital processing circuits can realise complete image sensing and processing functions on single CMOS VLSI chips. The device featured on the cover of this brochure, a fully integrated CCIR camera system, is a modest example of this potential.

* **System Integration**
* **Power requirements reduced by 1-2 orders of magnitude over CCD**
* **Production costs reduced by 1-2 orders of magnitude over CCD**
* **Customised applications**
* **Performance equivalent to CCD**



With such flexibility in design, coupled with cost and power requirements which were previously unattainable, this technological breakthrough offers opportunities to develop completely innovative products.

The inherent benefits of this technology open up an extensive list of potential applications. Essentially, any task requiring electronic vision with good performance at an economic price is a suitable candidate. So also are applications requiring low mass or volume and low power consumption.

The following list is by way of example and by no means exhaustive:

SECURITY DEVICES -	alarm verification, human recognition, 'smart' movement detection, remote surveillance, event recording, domestic security, door-entry, babywatch
BIOMETRIC VERIFICATION - SYSTEMS	fingerprints, faces, signatures
TRAFFIC CONTROL/ACCESS -	vehicle detection, traffic flow analysis, number plate recognition
AEROSPACE/MILITARY -	aircraft security, satellites, low-light binoculars, cockpit systems
INFORMATION TECHNOLOGY -	computer security, computer vision, desk top publishing
TELECOMMUNICATIONS -	videophone, telefax
AUTOMOBILE -	car security, reversing aids

ROBOTICS,

CAMCORDERS AND STILL CAMERAS,

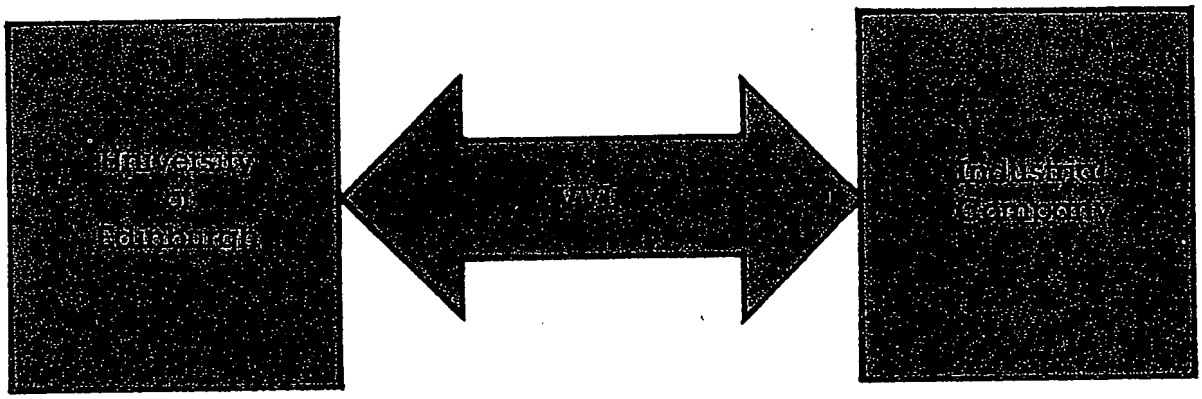
VISION TOYS,

BAR CODE READERS,

INSPECTION SYSTEMS.

VVL was formed to manage the development and commercialisation of this novel imaging technology. Based within the Technology Transfer Centre at Edinburgh University, it is funded principally by the Quantum Fund, a venture capital fund subscribed by four local institutions, namely the University, 3i, British Linen Bank and Scottish and American Investment Trust. The Scottish Development Agency have provided development funding.

The company operates by introducing interested parties to the technology and thereafter negotiating contracts for product development and providing marketing licences.



This arrangement offers significant benefits to industry :

- **access to unique technology**
- **smooth working relationship with strong University team**
- **direct influence on development**
- **customised contracts within general framework**
- **flexibility of a small company**

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